

Fast Accounting Research on Scene Text Spotting Recognized by International Conference on Acoustics, Speech, and Signal Processing (ICASSP)

- *A new approach for detecting and recognizing text in images using both visual and language information*
- *The company to establish AI research team “FA Research” with the aim of promoting the resolution of business challenges at the same time*

[Fast Accounting](#), which focuses on developing AI accounting solutions, announced today that its academic research paper on scene text spotting has been accepted by the International Conference on Acoustics, Speech, and Signal Processing (ICASSP), the world's largest and most prestigious academic conference focusing on signal processing. At the same time as the acceptance of this research paper, Fast Accounting has established FA Research with the aim of strengthening AI research that contributes to solving business challenges.

The paper accepted this time relates to the high-precision technology of the algorithm, scene text spotting, that converts images into text. Scene text spotting is an important field of research and development that is progressing worldwide, and both images and text are being studied as separate fields. In this study, we aimed to improve recognition accuracy by identifying and recognizing text from images while taking into account the semantic information of the text, rather than simply relying on the information in the image alone. By combining image and text information, we achieved more accurate recognition.



(a) Baseline ([ABCNet v2](#) [Liu+, TPAMI2022])

(b) Our proposed method (A3S)

Method of character recognition that combines image and language information (right) and conventional method (left)

The challenge we have been working on is the detection of text from images and the characterization of text. In this study, we proposed a novel methodology for fusing images and text information and developed an innovative fusion method that significantly improves upon existing techniques. The study achieved a breakthrough in accuracy, leading to its acceptance and recognition as a significant advancement in the field.

Masato Fujitake, our co-founder and Chief Research Scientist who holds a Ph.D., led the study and said, "I am very pleased that our research and development at Fast Accounting has contributed not only to the business but also to academia. Our challenge in this research was how to fuse images with text. Since both types of information are inherently different, simply matching them did not suffice. Consequently, we conducted a series of verifications and searched for a better way to accomplish the task. Additionally, as a start-up company, we had to conduct not only basic research but also product development simultaneously, which meant there were time constraints and other challenges outside of research."

Fujitake added, "In recent years, we have seen a rapid acceleration in the field of AI, particularly in image and text processing. In order to ride this wave and create value as a business, I believe it is important not only to follow the technology but also to actively contribute to it through basic and applied research at FA Research."

Keitaro Mori, the CEO of Fast Accounting, stated, "I am very delighted to see that the research paper by Fujitake, our CRS, has been accepted for publication by ICASSP. This is the second time our paper has been accepted for publication, following the IEEE SMC conference in 2021. I believe it is essential to conduct our own basic research in order to continue to improve our services and satisfy more customers."

Mori added, "Since our inception, we have focused on researching AI technology and incorporating our discoveries into the development of our services. To further enhance our research and development efforts, I am pleased to announce the establishment of 'FA Research.' Our goal is to enhance customer satisfaction by conducting research that not only improves our current services but also leads to the development of new ones."

Preprint of the accepted papers is available on arXiv at: <https://arxiv.org/abs/2302.10641>

About FA Research

FA Research is a team dedicated to fundamental and applied computer science research at Fast Accounting. Our team uses advanced techniques in machine learning, computer vision, and natural language processing to address business challenges and contribute to academia. We conduct research on cutting-edge technology, publish papers in domestic and international academic societies and journals, present at conferences, engage in industry-academia collaborations, and work closely with our product development team and university research labs to construct datasets and develop tools.

About Fast Accounting

We remove restrictions to give confidence and courage - Fast Accounting aims to create a society filled with confidence and courage by removing the restrictions faced by customers, our team members, and society.

Fast Accounting develops and provides an AI solution called 'Robota' and a business solution called 'Remota', which incorporates the features of the Robota series, with the aim of innovating and streamlining accounting operations. Additionally, we have been certified by the Digital Agency as a service provider for Peppol, the standard specification for digital invoices. We develop a digital invoice sending and receiving service that utilizes Peppol. Through these solutions, Fast Accounting supports the realization of corporate strategic accounting. Come and visit us at: <https://www.fastaccounting.jp/en>

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